

**Minutes of the UMC Meeting**  
September 26, 2005  
Roberts Hall, Carnegie Mellon University

The meeting was called to order by Chair Gary Messing. Messing thanked the meeting host Prof. Rohrer Chair of CMU-MSE for hosting the meeting.

**Attendees – appended**

Following introduction of attendees, Messing distributed the department/program chair roster for attendance and requested chairs to make corrections to the roster as appropriate, asked for additions to the meeting agenda. Hearing none, the agenda was followed as presented.

- Messing asked if there were any corrections to the minutes of the Spring 2005 meeting minutes. Rohrer moved, Alex King seconded that the minutes be approved as distributed. The minutes of the Spring 2005 meeting were approved by voice vote.
- Rohrer summarized the finances of the UMC stating that there is a little over \$7K cash, after today's expenses about \$5K will be left. Snyder suggested that treasury to remain at CMU, Messing proposed a task force of the executive committee be constituted to review and update the charter of UMC which may consider adding a treasurer position to the officers list. Invoices regarding UMC dues will be sent to departments next month.
- Messing asked if the Web site maintenance by TMS (which costs \$2000/yr) be continued or cancelled. Rohrer suggested that he will check with a private company to see if it is cheaper and more effective. He will report to the Executive council before the end of the year for action before the spring meeting.
- Response to UMC Annual survey is about 30% (30 out of 99). Some expressed concerns that 30% response does not accurately capture the national snapshot of the field. Messing suggested that a task force chaired by Snyder (GeorgiaTech), and Richardson (Clemson), Barnard (U. Pitt), and Allan (San Jose State) to review the process and the questionnaire, and bring recommendations to the council in the Spring.
- Robertson (UIUC) presented the ABET design experiences for MSE programs. Cargill (Lehigh) added his impressions from the meeting he had with TMS ABET Board yesterday. Of the proposed five "acceptable" experiences (**3a-e**), he thought that the committee would be receptive to **b**, and **c** as presented, **d** is acceptable with some clarification. Experiences described **a** and **e** would need to be re-worded to reflect the "*culminating experience*" and "*incorporating multiple constraints and teamwork.*" Cargill thought that the overall meeting was positive and he is optimistic about the chances for a positive response.

After much discussion, Brow (UMR) moved and Richardson (Clemson) seconded that the document be modified to address the concerns expressed by TMS ABET board and by the UMC members, and be brought back for a vote on before submitted to TMS ABET Board.

- After the break, Messing presented “*Trends in MS&E Education*” (appended to minutes) and posed the following questions:
  1. Should we increase the number of MSE graduates or export the jobs?
  2. Is broadening the Materials Education healthy?
  3. Should we consider expanding UMC to International MSE programs to bring the Global Materials Education community together? He said he would bring information to the spring meeting to further explore this idea.

Messing will update the report later this year and distribute the updated report to UMC membership, too.

- King (Purdue, currently Jefferson Science Fellow at US State Department) led the discussion on International experience for the MSE students. Observations shared by all:
  1. There is no longer a foreign language requirement,
  2. English became a universal research language,
  3. Our programs are becoming less international,
  4. International students we educated in the past are now back in their countries and established quality education and research programs,
  5. The multinational US companies are moving their research and development operations abroad.

He posed the question: “*Should we educate our students to have international experience?*”

Messing proposed a task force to study the issues regarding international educational programs/activities and report back to council. King will lead the task force. Morral (OSU), Cormack (Alfred), Chandran (Utah), Jones (UF) will serve on the task force to study and report to UMC in the Spring.

- King informed the group about the decadal study. The last study on MSE was done in 1990 and no plans exist for another as yet. On the other hand, SSSC initiated a “*materials physics*” study which is commissioned by NSF, DOE and others. King raised the question if UMC should nominate a representative to the SSSC committee.

Messing will seek nominations from UMC members and the executive committee will down-select from the list.

- Messing plans to hold the Spring meeting in Washington, DC. Possibly at the National Academy of Sciences’ Keck Building and NMAB director Gary Fishman to participate at the meeting.

- Cargill talked about discontinuation of IMR program at NSF. The justification was that the success rate was too low (6%) due to budget reduction and the program was suspended until funding level is improved. After some discussion, it was suggested that letters to the congressional representatives might be useful in improving the funding situation.

- Robertson brought the modified ABET proposal (items **3a** and **3e**) for discussion and vote. Snyder moved and Bordia seconded that the proposal be adopted with suggested modifications (strike the last sentence in **3e**). Motion passed with unanimous voice vote. (revised proposal appended)

- Messing stated that the Spring meeting will be held on second half of May 2006, and probably be 1.5 day-long. There is no FMS meeting next Spring.  
Meeting adjourned at 5:00 pm.

#### **Action items**

- Executive to update UMC Charter with a Treasurer position
- Send UMC invoices in October, 2005
- Rohrer to explore an inexpensive means to update and run UMC web site.
- Snyder to lead Task Force on improving annual survey and participation level by UMC members
- Messing to follow up on further information about possible expansion to International UMC
- King TF on International study abroad programs to report at spring meeting
- Messing to seek nominations for SSSC decadal study and exec committee to nominate one UMC member from the list to SSSC
- Messing to update data in the “*Trends in MS&E Education*” report and send to UMC members
- Cargill to present updated definitions of design in materials to TMS ABET Board for implementation in training materials.

#### **Attachments**

- List of attendees
- “*Trends in MS&E Education*”
- Approved definitions of Materials Design